

## CLAIMS

1. A machine-based method comprising  
receiving historical multi-dimensional data representing multiple source variables  
to be used as an input to a predictive model of a commercial system,  
applying transformations to the source variables that are selected to increase  
predictive power, and  
applying transformations to the data that are selected based on the strength of  
measurement represented by a variable.
2. The method of claim 1 in which the strength of measurement comprises at least  
one of nominal, ordinal, and interval.
3. The method of claim 1 in which the strength of a measurement is represented in  
stored metadata associated with the data.
4. The method of claim 1 also including  
displaying to a user a representation of a response function of a target variable against  
untransformed, transformed, and target variables associated with the data.
5. The method of claim 1 also including  
persistently storing both the source variables and related transformed versions of the  
source variables.
6. A machine-based method comprising  
receiving historical multi-dimensional data representing multiple source variables  
to be used as an input to a predictive model of a commercial system,  
adjusting unstable values of the variables to reduce inaccurate associations between  
predictor variables and target variables.
7. The method of claim 6 in which the adjustment of the unstable values comprises  
Bayesian renormalization.
8. A machine-based method comprising  
in connection with a project in which a user generates a predictive model based on  
historical data about a system being modeled, automatically imputing missing values for  
continuous variables associated with the data.

9. The method of claim 8 in which the user is enabled to invoke the automatic imputing as part of a user interface feature that displays information about variables for which values are missing.
10. The method of claim 9 in which the automatic imputing is invoked based on the variable or type of variable.
11. The method of claim 9 in which the variables for which missing values are imputed may be used in the model or may be transformed for use in the model.